



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/591,750

09/01/2006

Yoshiaki Kojima

46969-5538

3415

55694 7590 06/09/2009  
DRINKER BIDDLE & REATH (DC)  
1500 K STREET, N.W.  
SUITE 1100  
WASHINGTON, DC 20005-1209

EXAMINER

PENDLETON, DIONNE

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,750	<b>Applicant(s)</b> KOJIMA, YOSHIAKI	
	<b>Examiner</b> DIONNE H. PENDLETON	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tsukuda (US 7,359,305)** in view of **Yamada (US Pub 2002/0060967)**.

**Regarding claims 1 and 2,**

Tsukuda teaches a method for recording a recording track comprising steps of:

Rotating the disc ("**110**" in figure 1);

recording the recording track by irradiating a single beam from a single electron optical system ("**102**" in figure 1), by deflecting the beam onto the disc;

deflecting the beam in a radial direction to a position (**column 5:line 62 – column 6: line 6 discloses that the beam may be bent in the radial direction**) where a recording is to be formed when the beam reaches a predetermined position on the disc;

recording by irradiating the beam on the disc;

Art Unit: 2627

and deflecting the beam in a tangential direction (**column 5:line discloses bending the electron beam perpendicularly**);

Though Tsukuda fails to expressly teach that the method comprises recording a pit positioned between the recording tracks, Tsukuda does not restrict to use of the electron beam recorder for track recordings exclusively.

Yamada teaches that that a laser beam may be deflected for recording on the center of the groove track and the land track i.e., recording track and pit, as claimed (**see “Abstract”, and para [0048]**).

It would have been obvious for one of ordinary skill in the art at the time of the invention to alter the device of Tsukuda per the disclosure of Yamada, deflecting the electron beam of Tsukuda such that it operates to performing both track recordings and pit recordings, for the purpose of accurately forming a high quality and well balanced pits on a groove track and on a land track.

**Regarding claims 3 and 5,**

Tsukuda teaches an information recording method according to claims 1 and 4, wherein the beam is an electron beam (**see Figure 5, also see “101” and “103” in Figure 1**).

**Regarding claim 4,**

Tsukuda teaches an information recording apparatus including a rotation driving unit (“**110**” in **figure 1**) for supporting and rotating a disc (“**109**” in **figure 1**), a movement driving unit (“**111**” in **figure 1**) for moving the rotation driving unit in a radius direction of a disc, and a beam irradiating means (“**101**” in **figure 1**) for irradiating a single beam directly from a single electron optical system (“**102**” in **figure 1**), onto the original disc so as to be freely deflectable, the information recording apparatus comprising:

a deflection signal generating means for generating a radius direction deflection (**column 5:line 62 – column 6: line 6 discloses that the beam may be bent in the radial direction**) and a tangential direction deflection (**column 5:line discloses bending the electron beam perpendicularly**);

and a beam deflecting unit (“**105**”, “**106**”).

Tsukuda fails to expressly teach that the method comprises recording a pit positioned between the recording tracks. However, Tsukuda does not restrict to use of the electron beam recorder for track recordings exclusively.

Yamada teaches that that a laser beam may be deflected for recording on the center of the groove track and the land track i.e., recording track and pit, as claimed (**see “Abstract”, and para [0048]**).

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Tsukuda and Yamada, deflecting the electron beam of Tsukuda for performing both track recordings and pit recordings, for the purpose of accurately forming a high quality and well balanced pit on a groove track and a land track.

**Regarding claim 6,**

Yamada teaches that the track and pit are in parallel (**figure 2**).

**Regarding claim 7,**

By altering the device of Tsukuda, per the teachings of Yamada, the track and pit will be recorded by the same beam spot, as recited.

**Regarding claim 8,**

By altering the device of Tsukuda, per the teachings of Yamada, it follows that the deflecting of the beam will be at a position where a distance between a recorded track and pit is closest, thereby increasing the probability of accuracy in recording.

**Regarding claim 9,**

Tsukuda teaches that the beam is deflected toward *a revolution direction*, as broadly claimed.

***Response to Arguments***

2. Applicant's arguments with respect to claims rejected in the official action mailed 1/12/2009 have been considered but are not persuasive.

3. Regarding Applicant's Argument that **Tsukuda Does Not Record Both Track And Pit By Deflecting:**

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Examiner relies upon the Yamada reference as disclosing the obviousness of deflecting a laser beam to record both pits and tracks.

4. Regarding Applicant's Argument that **Yamada Irradiates Two Laser Beams From Two Sources And Therefore Fails To Teach Irradiating A Single Beam, As Recited:**

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Examiner relies upon the Tsukuda reference as disclosing the means for irradiating a single beam directly from a single electron optical system (102), as recited.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIONNE H. PENDLETON whose telephone number is (571)272-7497. The examiner can normally be reached on 10:30-7:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2627

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dionne H Pendleton/  
Examiner, Art Unit 2627

/Wayne Young/  
Supervisory Patent Examiner, Art Unit 2627